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| STAAS & HALSEY LLP | | | ZHU, RICHARD Z | |
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|-----------------------------------|--|
| Office Action Summary | Application No. 10/750,215 | Applicant(s) KIM ET AL. | |
| | Examiner RICHARD Z. ZHU | Art Unit 2625 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 13 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1, 2, 8, 22 and 24 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1, 2, 8, 22, and 24 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Acknowledgement

1. Acknowledgement is made of applicant's amendment made on 05/13/2008. Applicant's submission filed has been entered and made of record.

Response to Applicant's Arguments

2. Applicant's arguments have been fully considered, however, they are not persuasive.

Applicant argued "Gabbe specifically recites that the first and last pages still operate in accordance with the multiple pages per side function due to the fact that blanks will be left on the sheet where pages could be placed" on the basis on Gabbe's disclosure at Col 6, Rows 19-20. The examiner disagrees.

Gabbe discloses an invention which maximize the usable area on a sheet on which print data are to be printed upon by maximizing the scaling factor used to print the page from the data file on the sheet (**Col 6, Rows 45-54**). In this invention, the user can specify additional parameters to print at least the first and the last sheet of the data file on a single sheet while printing all the remaining sheets in accordance to the multiple up parameter specified (**Col 6, Rows 15-20 and Col 9, Rows 36-48**). Without implementing the inventive step of Gabbe, that is in arts prior to Gabbe's invention, a large amount of blank space would result because scaling is done to the resulting multiple up image (**See for example, Fig 2A**) and that it is up to Gabbe's method to maximize the usable area by arriving at an optimized layout configuration, by minimizing the blank area (**See for example, Fig 2C**). This goal is achieved by implementing grid fitting procedures that arrives at the largest usable scale

factor (**Figs 4-6, Col 8, Row 27 – Col 9, Row 25**). Therefore, when a user specified that a last page or a first page to be printed on a single sheet independent of the multiple up parameter, the print symbiont (**Col 5, Rows 18-27**) would derive the maximum scaling factor for the data file that would minimize the blank area like it did in Fig 2C. Therefore, such printing of a single image on a single sheet using said first sheet or said last sheet would be substantially the equivalence of applicant's commercial printing as shown in Fig 7 and Paragraph 70 of applicant's specification.

Applicant further argued that *Kohri* makes no distinction between the type of data that are recorded on the pages 1-3, such that one of the pages is identified as having complex contents and forms vs. simple contents and forms.

The applicant's specification defined complex contents and forms on the basis of interpreting a PDL to make the distinction between what is simple and what is complex. However, such limitation from the specification is not read into the claims; i.e., although the claims are interpreted in light of the specification, limitations from the specification are not read into the claims. See **In re Van Geuns, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993)**. The claimed limitation of "complex contents and forms" can be reasonably interpreted to mean many things, including that of *Kohri*'s determination of main scan length; that is, if a data file has a main scan length exceeding that of the paper on which data file is printed upon, it is judged to be having a complex content and multiple up printing is not executed. If the main scan length do not exceed that of the paper's main scan length, it is judged to having a simple content so that multiple up printing with other data file is executed. Applicant is recommended to further define the meaning of complex contents and forms within the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 1, 8, 22, and 24 are rejected under 35 U.S.C. 102(b) as being anticipated by ***Gabbe et al. (US 4928252 A)***.

Regarding Claim 1 and 8, *Gabbe* discloses printer (Fig 1 and see Col 4, Rows 34-44) implemented by a computer (Fig 1, Computer System 10 and see Col 4, Row 40.

Computer system is properly interpreted to have a computer program on a computer readable medium that is used to execute the functions set forth within the computer program) using a multiple pages per side function (Fig 7, 9 pages on a single sheet), by which a document comprising a plurality of pages is printed using the N-up function of printing multiple pages on a sheet of paper (Fig 7, 9 pages on a single sheet) comprising:

setting all of the plurality of pages of the document to be multiple printed according to the Nup function (Col 5, Rows 57- Col 6, Row 21, the user set forth the parameter in which printing is to be executed whereas the computer will determine in Col 3, Rows 18-46 the proper setup of printing in accordance to user-defined parameters).

selectively changing a setting of at least one of the pages, from the plurality of pages set to be multiple printed, to be commercially printed (Col 6, Rows 15-20, at least allowing the user to designate a first page or a last page of a received print job to be printed

commercially while remaining pages are printed in accordance to “multiple-up” specified);

determining whether a page to be printed is one of the pages set to be multiple printed **(Col 6, Rows 14-21).**

processing data of the page to be printed as data to be multiple printed in response to determining that the page to be printed is one of the pages set to be multiple printed **(Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 5, Row 65- Col 6, Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed and a certain pages out of a plurality of pages are to be multiple printed).**

processing data of the page to be printed as data to be commercially printed in response to determining that the page to be printed is not one of the pages set to be multiple printed **(Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 6, Row 17 - Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed. As such, a determination is made by the program to separately processing the pages to be commercially printed from the pages to be multiple-up printed).**

printing a plurality of pages according to the processed data **(Col 5, Rows 35-64);**

wherein the Nup function is not applied **(Col 9, Rows 36-48)** to the at least one of the applied set to be commercially printed **(Col 9, Rows 8-25 and see Fig 2C for illustration purpose; the principle of maximizing scaling factor is applied to the data file that is**

specified by a user to be printed on a single sheet of paper independent of the Nup parameter).

Regarding Claim 22, Gabbe discloses a printing method (Fig 1 and see Col 4, Rows 34-44, printer implementing the following method) using a multiple pages per side (N-up) function (Fig 7, 9 pages on a single sheet) by which a document comprising a plurality of pages is printed using the N-up function of printing multiple pages on a sheet of paper (Fig 7, 9 pages on a single sheet), the method comprising:

selectively setting of at least one page of the document, different from a corresponding setting of another page the document, to be one of multiple printed and commercially printed (Col 6, Rows 15-20, at least allowing the user to designate a first page or a last page of a received print job to be printed commercially while remaining pages are printed in accordance to the “multiple-up” specified);

processing data of a first page (Col 6, Row 15-20, all pages other than the first and last pages are specified to be multiple printed), of the plurality of pages, to be printed as data to be multiple printed in response to determining that the page to be printed is set to be multiple printed (Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 5, Row 65- Col 6, Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed and a certain pages out of a plurality of pages are to be multiple printed);

processing data of a second page (Col 6, Row 15-20, the first and last pages are specified to be commercially printed), of the plurality of pages, to be printed as

data to be commercially printed in response to determining that the page to be printed is not set to be multiple printed (**Col 5, Rows 35-64 discloses how the device goes about executing user-defined parameters whereas Col 5, Row 65- Col 6, Row 20 disclose that the user defines a certain pages out of a plurality of pages are to be commercially printed and a certain pages out of a plurality of pages are to be multiple printed**) and

printing the plurality of pages based respective processed page data (**Col 5, Rows 35-64**).

Regarding Claim 24, *Gabbe* discloses

selectively setting of at least one page of the document, different from a corresponding setting of another page the document, to be one of multiple printed and commercially printed (**Col 6, Rows 15-20, at least allowing the user to designate a first page or a last page of a received print job to be printed commercially while remaining pages are printed in accordance to the “multiple-up” specified**);

generating a page number for each of the multiple pages printed on the sheet of paper (**Fig 7, page number or sequence is known by the printer and therefore it is generated**);
and

printing the page numbers along with the multiple pages on the sheet of paper (**If printer can print all the received pages, then it can inherently print the page numbers**).

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 2 is rejected under 35 USC 103 (a) as being unpatentable over ***Gabbe et al. (US 4928252 A)*** in view of ***Kohri et al. (US 5959744 A)***.

Regarding Claim 2, *Gabbe* does not disclose the selective changing of the setting of the at least one of the pages to be commercially printed is based on a determination that the at least one of the pages has complex contents and forms.

Kohri discloses a method of multiple-up printing wherein a selective changing of a setting of at least one of the pages to be commercially printed is based on a determination that the at least one of the pages has complex contents and forms (**Col 2, Rows 55-67, measuring data amount of one page, Col 3, Rows 25-30 comparison with a pre-determined amount to determine if it have simple contents, Col 5, Rows 61-68, multiple up printing if the page is of simple content, that is less than the predetermined amount of data. Furthermore, see last fig of Fig 9 where it is shown that page 3 is determined to be uncombinable with page 1 and 2 due to its size. Therefore, only page 1 and 2 can be printed. As such, in a scenario where it is determined that page 2 can not be combined with page 1 due to size, then page 1 will be commercially printed because it has complex**

contents and forms that would not allow page 2 to be printed on the same page as page 1).

Gabbe and *Kohri* are combination because both are in the field of multiple-up printing.

It would've been obvious to one of ordinary skill in the art at the time of the invention to enhance the determination ability of the device of *Gabbe* with the determination capability of *Kohri* so as to determine how many pages are to be printed on a single page whereas the motivation would've been to "provide a recording apparatus which records image data without wastefully consuming recording sheets" (*Kohri*, Col 1, Rows 22-24).

Therefore it would've been obvious to combine *Gabbe* and *Kohri* to obtain the invention set forth in Claim 2.

Conclusion

7. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event,

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however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richard Z. Zhu whose telephone number is 571-270-1587 or examiner's supervisor King Y. Poon whose telephone number is 571-272-7440. Examiner Richard Zhu can normally be reached on Monday through Thursday, 6:30 - 5:00.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

RZ²
06/18/2008

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